DOCUMENT RESUME

ED 146 864 HE 009 430

AUTHOR Potter, George T.
TITLE The Promise of Interdisciplinarity and Its Problems. Ramapo Papers, Volume 1, Number 3.
INSTITUTION Ramapo Coll. of New Jersey, Mahwah.
PUB DATE 77
NOTE 30p.
AVAILABLE FROM Ramapo College of New Jersey, Mahwah, NJ 07430 ($0.75)

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS College Faculty; Colleges; *Curriculum Development; Educational Problems; Foreign Countries; Graduate Study; *Higher Education; *Interdisciplinary Approach; Program Evaluation; *Special Degree Programs; Specialization; State Universities; Teacher Exchange Programs; *Undergraduate Study
IDENTIFIERS Ramapo College of New Jersey; University of California Santa Cruz; University of Sussex (England); University of Wisconsin Green Bay

ABSTRACT

The decision to pursue interdisciplinarity at Ramapo College was based on theory and on the conviction that the traditional departmental approaches were inadequate to provide for the liberal or general educational interests of a broad-based student body. Some of the problems encountered are that: (1) there is not campus-wide agreement about the meaning of interdisciplinarity; (2) there is no predetermined subject matter, established method, or national establishment, nor are there any unique analytical tools, as in a traditional discipline; (3) academic supervision strains the credibility and competence of the administrator; (4) much more time is required for preparation and presentation; and (5) effective programs are more costly. The fascination of graduate programs is a dilemma for advocates of interdisciplinarity, since the setting aside of the conventional wisdom about specialized graduate study creates an uneasiness in the educational establishment. The examples of undergraduate interdisciplinarity provided by other institutions, such as the University of Sussex, the University of California at Santa Cruz, and the University of Wisconsin at Green Bay, give interesting points of comparison, and may allow exchange of faculty members and ideas. (MSE)

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RAMAO Papers

The Promise of Interdisciplinarity and Its Problems

by

George T. Potter

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Vol. I, No. 3

HE009430

Ramapo Papers is a publication of Ramapo College of New Jersey, a four-year liberal arts college founded in 1971 and consisting of several schools and divisions organized around interdisciplinary themes. These are: The Schools of American Studies, Contemporary Arts, Environmental Studies, Intercultural Studies, Metropolitan and Community Studies, Social Relations, Theoretical and Applied Sciences; and the Divisions of Teacher Education/Physical Education, and Professional Institutes. The Learning Center is also a regular part of the College Structure.

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Price per copy 75¢. Subscription (8 issues) $5.

George T. Potter

THE PROMISE OF INTERDISCIPLINARITY AND ITS PROBLEMS

Mr. Potter is President of Ramapo College. The present essay is based on a paper presented to the Group for Interdisciplinary Education Research, a Ramapo College Colloquium, during the Fall, 1976 semester.

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The Editorial Board of Ramapo Papers is pleased to present George T. Potter's essay, The Promise of Interdisciplinarity and its Problems. It offers the reader, we believe, a useful and significant over-view of many of the institutional problems of interdisciplinary education. Growing out of more than 20 years of experience in a variety of institutional settings in the United States, Canada, and Great Britain, the text is clearly based in experience--that of the author's to be sure but measured against the reports and self-study of many others. As one commentator noted, "Obviously, it was written by one who has been in the trenches."

Among the matters that were highlighted in discussion of the essay, the matter of "standards" it was noted was a crucial one. Clearly, this remains a problem both in measuring student achievement and in assessing faculty competence. Another main theme noted in the faculty colloquium where this paper was first presented centers on the problem of faculty preparation, recognition, and on-going research. The need to develop means of regular communication between teachers and scholars engaged in interdisciplinary study at a variety of levels and in many places is clearly identified. Yet, for all the attention to "problems" the author remains basically optimistic. As he notes, "Many interdisciplinary ideas have already been integrated into the conventional wisdom of higher education and my guess is that they will remain there..." At a time when the common sense of the nation has it that higher education has lost its "glamor" it is all the more important to demonstrate the continuing vitality of the collegiate and university enterprise. This Mr. Potter does!

George Potter was born in England and took an M.A. degree in Politics, Philosophy, and Economics at Oriel College, Oxford. Beginning his professional career with Oxford's "extension" program, he went on to similar activities as Extention Assistant at the University of Alberta in Edmonton, Canada in 1957. He moved on to Calgary in 1960 and was named General Secretary of Conferences, a post in which he developed plans for a new campus (now the University of Calgary). Continuing this commitment to building new institutions, Mr. Potter became a staff member at Grand Valley State College (Michigan) in 1962 and was appointed its Vice President for Academic Affairs and Dean of Faculty in 1966. In 1969 he was named the founding President of Ramapo

College of New Jersey. Thus, Mr. Potter brings to his theme the experience of planning and founding three significant interdisciplinary institutions and a life-long commitment to the "non-traditional" in education.

Naturally, a project like Ramapo Papers benefits from the efforts of many people. The Editorial Board reviews all submissions; other members of the faculty and staff of Ramapo College participate as critics and reviewers. We are, in addition, indebted to members of the wider academic community who are engaged in interdisciplinary education. A note of thanks therefor to Professor Annette K. Baxter, Chairperson, Department of History at Barnard College (N. Y.) and Edward J. Kormondy, Vice President and Provost at The Evergreen State College (Wash.)

Finally, we wish to emphasize our continuing invitation to our colleagues to submit appropriate essays for publication. And, we invite your comments.

Howard B. Radest

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THE PROMISE OF INTERDISCIPLINARITY AND ITS PROBLEMS

1.

The department is a relatively new entity in the field of higher education. It arose in the nineteenth century as the academic community strained to keep abreast of the expanding frontiers of knowledge. By establishing a division of labor in the academic world, scholars were able to make more rapid adjustments to the changing scene, and in many cases they themselves initiated discoveries in their respective fields of interest. So this new unit of organization found general acceptance, and in the fullness of time it came to dominate our colleges and universities.

A convenient comment on this growth of departments has been made by Arthur Levine and John Weingart in their book Reform of Undergraduate Education.

> "The use of departments originally represented an efficient way to group faculties and the areas of knowledge they studied, and later to divide the money and facilities of the university, and still later to design and administer curriculum. The result of continually adding to the function of departments has been to make departments the only academic unit in the university. This, in turn, has led to the belief that departments are not just administrative conveniences, but the naturally ordained divisions of knowledge. Sadly, scholars have accepted this loss of the fundamental unity of knowledge. In everyday life at the college, people are so separated by their departments that interaction between them has ceased; and non-disciplinary programs, notable in general education, have been eroded by specialization."[1]

Ever since the rear guard action fought in the 1820's by the traditionalist faculty at Yale, there have been periodic reactions to this growing tide of specialization in higher education by concerned groups of faculty members. The famous Yale Report of 1828, which is reprinted with a commentary in Hofstadter & Smith, American Higher Education, A Documentary History (pp. 275-291), reaffirms the view that undergraduate education should involve a prescribed program of studies including only those branches of knowledge "of

which no one destined to the higher walks of life ought to be ignorant." Due to the pressure of such faculty members we have avoided the extreme specialization found in some other countries, and we have retained the notion that all students should be required to study subjects outside of their selected major fields. In isolated instances, successful efforts have been made to retain the essence of the classical program proclaiming the unity of knowledge. For example, St. John's College (Annapolis) proudly proclaims, "For more than two thousand years...the liberal arts were the backbone of all formal education." Despite these countervailing pressures, the inexorable trend toward departmental specialization continued, and in every generation the advocates of liberal education have had to renew their claims for equal time in order to ensure that college students would emerge on graduation as well rounded men and women. A fascinating example of the interplay of these forces within a single institution is to be found in the recent publication The Idea of the University of Chicago,[2] which reports the progress of this debate through the speeches of successive Presidents of the University.

In later phases of the debate between specialized and non-specialized programs, the advocates of non-specialized undergraduate education became involved in an internecine struggle centered on the differences between liberal education on the one hand, and general education on the other. Advocates of "general education" objected to "liberal education" because of its "elitist" history and affiliations. Historical links with the education of "gentlemen" were cited, and nostalgia for Latin, Greek, Hebrew, and Philosophy instead of more relevant subjects such as Sociology, Psychology, and Business Administration was ridiculed. At the second level, the "non-vocational" implications of liberal education were contrasted (favorably or unfavorably, depending on the writer's point of view), with the "career related" aspects of general education.

Predictably there was never any final settlement of these issues and after many years of this give and take between the proponents of liberal and general education, the thought arose in some minds that any effort to dilute over-specialization through programs that were themselves staffed exclusively by faculty members with departmental affiliations and ambitions would be bound to flounder. So new approaches to the organization of faculty members and to

the construction of programs were attempted. Hence the establishment of programs such as the Basic College at Michigan State University, and a host of other experiments on other campuses in which every device from divisional organization to the cluster college variant of the Oxbridge model was employed in an effort to limit the trend toward specialization.

Thus the scene was set for the move into interdisciplinarity as an approach to college organization and curricula. As we shall note below, a wide range of interdisciplinary situations and programs have emerged over the past fifteen years or so, and various attempts have been made to define interdisciplinarity. The definition used by the Centre for Educational Research and Innovation of the Organization for Economic Cooperation and Development in a questionnaire administered in 1970 read as follows:

> "Interdisciplinary...An adjective describing the interaction among two or more different disciplines. This interaction may range from simple communication of ideas to the mutual integration of organising concepts, methodology, procedures, epistemology, terminology, data, and organization of research and education in a fairly large field. An interdisciplinary group consists of persons trained in different fields of knowledge (disciplines) with different concepts, methods, and data and terms organized into a common effort on a common problem with continuous intercommunication among the participants from the different disciplines."[3]

The responses to this questionnaire were published in 1972 and serve as a basic point of reference for all students of this topic.

In a second major commentary on interdisciplinarity, published in 1975 by the Nuffield Foundation in England, four major types of interdisciplinary courses are identified and they are described as follows:

> "First, those which make links or build bridges between two disciplines...; secondly, those organized on a broad faculty basis (natural sciences, social science, etc.); (third), those based on the study of an area or period; and (fourth), a rather variegated group focussed on a 'theme' or 'problem'. These types are not mutually exclusive, but

they help us to get a picture of the situation. There are of course others which refuse to be slotted into any category. The degree courses in Human Purposes and Communication (Bradford), in Systems and Management (City University), or in International Studies (Birmingham) are difficult to classify.

"Three other points should be made. First, the weighting of the various disciplines can vary: in some cases there is equal weighting; in others there is a major/minor or core/contextual arrangement. Secondly, not only does the number of interdisciplinary courses change from year to year (it is increasing at present) but the nature of the courses and the extent of integration can change also. Each course has its own history and pattern of development. Many become more cohesive as time goes on; some decompose and revert to a juxtaposition of disciplines."[4]

2.

Quite obviously we are dealing with a wide range of differing situations that can hardly be investigated in a single presentation. For the rest of this paper therefore I shall limit my exploration of the promise of interdisciplinarity and its pitfalls to a selected series of institutional examples starting with our experience here at Ramapo College. Then I shall move on to the University of California at Santa Cruz for some comments about interdisciplinarity in graduate programs, and to the University of Sussex in Great Britain, which is perhaps the longest lived example of an institution that was founded with interdisciplinary objectives in mind. I shall also draw on experiences at the University of Wisconsin at Green Bay for the purpose of illustration. I choose the Ramapo example to start out with, not because it has any claims to temporal priority, but because it is the place that I know best.

In deciding the form of academic organization to adopt here at Ramapo, we were somewhat influenced by ideas similar to those expressed by Levine and Weingart in their comments on departments and disciplines. But our decision to pursue interdisciplinarity in our organization and programming was based also on a conviction that the traditional departmental approaches to undergraduate education were inadequate to provide for the liberal

or general educational interests of a broad based student body unless they were reinforced by programs of interdisciplinary concern. Indeed, some of us involved in the original planning viewed departments as undesirable elements within an undergraduate college in the 1970's. They seemed to us to be dominated by graduate school interests to the point that they relegated any attention to our overall objectives to superficial survey courses at the introductory level, and were inclined to devote the major share of their resources to the preparation of candidates for admission to the graduate schools. Despite ambitious "disciplinary" claims by many departments, we could observe little correspondence between their course requirements and our educational objectives. We lacked faith in their assumption that these objectives would be achieved via some kind of serendipity as students moved through the required courses one by one. We also felt that the boundary lines set between some disciplines were obscuring effective analysis of critical emerging social questions found in fields such as International Relations and Environmental Planning. So, we decided to create new interdisciplinary units that would apply the methods and analytical tools of various disciplines in new examinations of these problem areas.

More than five years have elapsed since we made those early decisions, so it is timely to review our experience with interdisciplinary approaches to see if they have fulfilled their promise.

In these few years, we have moved from the planning phase into full scale operation with nearly 200 faculty members working with an enrollment of more than 4,000 students.[5] Student and faculty members are organized into seven "Schools", each named to indicate its focus or theme: American Studies; Intercultural Studies; Contemporary Arts; Metropolitan and Community Studies; Environmental Studies; Social Relations; Theoretical and Applied Science.

Reference to our College Catalog and to the Self-Study Report that was published in 1975 indicates that we have clearly adopted the interdisciplinary model in the structure of our academic units, and that we have incorporated interdisciplinary approaches in our course outlines and in our graduation requirements. And, as Fred Waring, Director of Institutional Research observed on page four of the Self-Study Report, "...majors at Ramapo are more

broad and integrative than most undergraduate disciplinary majors tend to be."

Despite this general support of interdisciplinary objectives and methodologies, or perhaps because of them, there is by no means any campus-wide agreement as to the meaning of interdisciplinarity. Indeed there are several comments in the Self-Study Report that indicate a wide range of meanings or interpretations.

For example:

> "Consistent with Ramapo's commitment to interdisciplinary education, the Master Plan recommended that every School of American Studies student regardless of major, complete twenty credits in American Studies interdisciplinary courses beyond the introductory level. Neither the requirement nor the designation implies a universal agreement by the School of American Studies faculty as to a definition of 'interdisciplinary'."[6]

> "(The School of) Contemporary Arts recognizes that the accumulation of credits in different disciplines in itself does not constitute interdisciplinary education. The latter is achieved when the student has acquired a solid grounding in one or more disciplines and is able to relate that discipline or disciplines to other disciplines in meaningful ways."[7]

> "The Social Relations program provides... students with an interdisciplinary approach to a critical analysis of modern societies... The focus of the program is an interdisciplinary core of courses which lead either to a Human Environment (Social Relations) major or a disciplinary major."[8]

> "A highly flexible interdisciplinary major in Intercultural Studies incorporates a wide range of 'concentrations.' These are available in African, Asian, European or Latin American area studies, Social Development studies and Religion studies. Students wishing to explore other concentration possibilities e.g., a period concentration in Ancient or Future Studies or a problem concentration in

World Order Studies, can seek the advice of their tutors or the School of Intercultural Studies Director."[9]

"As conceived by the faculty of the School of Theoretical and Applied Science, the interdisciplinary intention of the College serves four principal functions. It provides a rationale for organizing programs of multi-disciplinary studies designed to provide students with specific vocational or pre-professional training and education. ... it also provides the focus for a multi-disciplinary approach to the study of a particular phenomenon... It acts as a stimulus in the search for transdisciplinary linkages between fields in inquiry. Finally, "Interdisciplinary" provides a justification for assembling courses offered both within Theoretical and Applied Science and throughout the other Schools of the College as part of a cohesive core of course offerings intended for both science majors and non-science majors."[10]

"The Professional Institute shares with the other academic units the charge of supporting interdisciplinary Liberal Arts and Sciences education. The requirement that each student not only complete the business program but also have a liberal arts major is indicative of how this charge is carried out."[11]

Clearly, it would take much detailed study to identify and classify the different degrees of interdisciplinarity mentioned in these citations, but time is not available and tact urges administrative restraint, so we can leave that to other observers. Fortunately, we have a high tolerance for ambiguity at Ramapo so we need not pursue whether or not these differing interpretations represent a problem.

Moving to the substance of the matter, there is the problem stemming from the absence of many of the points of reference available to teachers working within an established discipline. There is no predetermined subject matter, no established methods, no unique analytical tools, and no national establishment with which to interact. To be sure, the interdisciplinary teacher can draw on the tools of many disciplines, but he or she is essentially on his own, to work out his or her own successes and live through

his or her own failures.

As a consequence of this lack of the paraphernalia of a discipline there is, first of all a difficulty facing students and faculty working in the program. There is for example, nothing like an American Chemical Society to stipulate the courses that should be taken. There are no Graduate Record Examinations that will reflect the unique range of courses included in the program. So the definition of graduation standards become an expression of faith in the College and confidence in the teachers involved in the program.

This may be all very well in a pilot program at a prestigious university. But what will the outside world have to say about the average graduate of an interdisciplinary state college. Will he get recognition in the job market? Will she fit into graduate school? The answers are not easy to come by at this early point in Ramapo's history. This may explain the relatively high attrition rates in many interdisciplinary programs at the end of the Freshman year as students begin to become preoccupied with their choice of "major" and their prospects for future admission to graduate school.

In order to avoid self-serving judgements regarding academic quality, and as a means of building confidence in the standards maintained in interdisciplinary programs, it might well be necessary to provide for a periodic review by outside consultants drawn from a consortium of institutions offering such programs. This approach would be similar in many ways to the use of external examiners to add authority to examination boards in emerging departments of newly established universities. It would encourage more thorough program planning and more complete program evaluation. Through such "quality control" procedures any concern about the "ephemeral" or "superficial" nature of interdisciplinary programs, either on the part of students or within the wider establishment of higher education, could be carefully investigated, and suitably resolved.

Another problem stemming from the broad focus of interdisciplinary academic units is that of academic supervision by School Directors and Personnel Committee members. It is often said in traditional college situations that representatives of one department are not qualified to judge the performance of faculty members in other departments. Yet in the interdisciplinary unit we place a Philosopher or an Historian at the head of a School including

Sociologists, Psychologists, Economists, and teachers of other subject areas as well. This strains the credibility and competence of the Unit Head as he makes his own evaluation of a colleague's instructional plans and of that colleague's performance in the program. It also complicates the work of unit personnel committees as they evaluate performance for re-appointment, promotion, or tenure consideration. In this situation the danger of resorting to subjective criteria in reaching personnel decisions is obviously present.

From the standpoint of the College as an overall learning community it proves to be difficult to monitor interdisciplinary programs to ensure that the comprehensive educational objectives of the College are being pursued and achieved by the students and faculty involved. Some external pressure can be brought to bear through College wide requirements, such as the literacy requirements monitored by the Learning Center. (The Learning Center at Ramapo College offers developmental programs in reading, writing and mathematics. It administers tests in these skills for all entering students, and students who fail to achieve "passing" grades are directed into its developmental programs. Some students resisted these requirements, especially in our early years of operation. As a result we have now incorporated the Learning Center courses into a carefully articulated Freshman Program required of all students.) Although we have thus provided a check on our students' basic skill competencies, there are few opportunities for specific evaluation of students' progress toward other program objectives. This may be a reason why some of our Senior Interdisciplinary Seminars have had to be restructured because of student unpreparedness for high level analysis of the subject matter contemplated.[12]

Of course, we are aware of that aspect of this problem that is of personal and professional concern to the faculty members involved in the program. As A. S. Milnard and C. Studdent Kennedy put it in their report in the Times Higher Educational Supplement in 1974,

> "The university teacher judges his expertise and receives his esteem and rewards for the most part within the framework of one subject. His courses and examinations belong to the traditions of that subject, his publications are judged by other teachers in that subject, he attends its annual conference and, if he is successful, he is promoted through

> a small and fairly familiar peer-group to a chair from which he continues to organize the teaching of the same subject. There are great penalties attached to breaking out of this cocoon into an insecure world of fewer peers, fewer conferences and fewer senior posts and the best and most confident of teachers is quite justified in looking very hard at what sort of prospects the system offers him if he once casts aside his subject label."

Yet another dimension of difficulty in interdisciplinary programs is the fact that they require much more time for preparation and presentation than courses in established disciplines. This is inevitable in any course that deals with the changing contemporary scene. The problem is compounded in situations where team-teaching is needed in order to extend the interdisciplinary features of the course. Faculty members seem quite willing to invest this additional time in the initial years of development. Will their enthusiasm be maintained in the long run - or will they seek peace and refuge within the confines of a discipline? Thus suggests a special need for sabbatical programs in colleges that feature interdisciplinary work.

Finally, on this matter of the time involved in interdisciplinary programs, we should think once more about the student. Since there are few norms, the faculty sometimes tends to overload their interdisciplinary courses in order to protect themselves or their students from external criticism. This may work to a student's disadvantage as he attempts to keep abreast of the course and tries to relate it to other personal and educational experiences. In addition, many students have no initial preparation for the interdisciplinary experience, and they may seek refuge in safer disciplinary options if they find their first exposure to interdisciplinarity too demanding.

Notice that I have gone this far into the discussion without mentioning budgets. Now I must say something about cost because it may be that effective interdisciplinary programs should be more costly than established disciplinary programs. Where team-teaching is involved with relatively small class sections, as in Ramapo's Senior Interdisciplinary Seminars, the instructional expense is increased. Then, in addition, there should be some financial recognition extended to the faculty for the greater preparation

time referred to above. And, since individual counselling and instruction is often included in interdisciplinary programs, the added costs involved should also be taken into consideration. What it amounts to, I suppose, is that if you want a better product you should be prepared to meet the costs that it generates.[13]

3.

Another dilemma for advocates of interdisciplinarity is the fascination of graduate programs. If small classes are good, then smaller classes are better. If working with good students is satisfying, then sharing an intellectual challenge with a leading student is even more rewarding - and so the argument proceeds and the interdisciplinary teacher starts to think in terms of graduate teaching. Then comes the question of how to proceed. Shall it be more of the same broad selection that was included in the B.A. program, or should the program be narrowed down?

With respect to this problem, we have an excellent case study to examine at the University of California at Santa Cruz. Established in 1965 as a University organized without departments, it has subsequently developed as the best-known example of an interdisciplinary University organization in the country.

In California, they decided to move into graduate studies from the start. Thus by 1966 they offered some disciplinary graduate work and other less structured curricula like one described as the "History of Consciousness" in which students were to complete a combined program in History, Literature, Philosophy or Psychology and to receive the degree with a parenthetical notation indicating the field of specialization. In the early years there was some expectation that this program might define a new field of study but this idea was abandoned when, to quote from the Santa Cruz Self-Study published in 1975, it was realized "that no agreement could be reached on the nature of the emerging new discipline." The Self-Study goes on to comment that,

> "The program has become an "umbrella" under which graduate students may complete individual and very dissimilar projects. In the past few years, those projects have focused on a range of topics and authors from Montaigne and Plato, through corporate capitalism and

> prison reform, to Hegel, Heidegger, and Marx. Students work with an individual faculty sponsor to define the boundaries of the topic in which they will prepare a thesis (or perhaps a film or an exhibition), including language requirements, specific classes, and materials on which they may expect to be examined. The only experiences common to all students are seminars in their first year, and the expectation that they will do some teaching of undergraduates while at Santa Cruz."[14]

This comment highlights the uneasiness that arises throughout the educational establishment when some element of the conventional wisdom that surrounds graduate education are set aside. A conventional graduate student works under the supervision of a committee rather than an individual faculty sponsor. He or she completes several prescribed program elements in a more or less established sequence instead of exploring the territory enclosed within boundaries established in consultation with the sponsor. He or she emerges as a competitor within an established peer group, and almost by definition, the graduate program becomes a matter of the survival of the fittest. Thus it is not surprising that the Self-Study Commission reached the following conclusion as a result of its study of the "HisCon" Program.

> "Thus, while this Commission does not presume to judge the academic quality of separate programs, we believe that the problems of HisCon are both intellectual and structural. Structural changes must be made if the intellectual problems are to be adequately confronted."

Although I can see the need for structural changes to avoid situations in which just one faculty member can make or break a graduate student's career, and to strengthen the place of interdisciplinary programs within the University, I trust that the solution to the "intellectual problems" that they identify will not involve a capitulation to the educational establishment.

Although it is too soon to know how the university will resolve the questions raised about the "HisCon" program, it is interesting to note that they have recently proposed a new Interdisciplinary Program of Graduate Studies in Theoretical and Applied Sociology and they are awaiting statewide approval of this program. As

described in the Self-Study,

> The Program specifically avoids the structural pitfalls of the History of Consciousness Program. It is an interdisciplinary program which addresses the problems of complex social systems in varying historical and geographical contexts. It is an applied program, with a field study component, which will prepare students for non-academic as well as academic roles; yet all students will be required to gain teaching experience after preparation through a Teaching Practicum. Although it will involve one or more faculty members from all the disciplines in the Social Sciences Division, as well as from History (in the Humanities Division), administrative responsibility for the program is clearly and carefully lodged with the Board of Studies in Sociology."[15]

It thus appears that the Board of Studies in Sociology will have a major role in influencing the future development of interdisciplinary programs at the university. Will the Board subscribe to the notion of graduate study as an exploration of new problems and unknown territory, or will it define a new series of disciplinary requirements and impose these requirements on all its students? Since the program is avowedly an "applied" program, with an extensive "fieldwork" component, there can be hope that the Board will avoid the temptation to define its requirements too narrowly. It is on this hopeful note that I shall move on to the next problem raised out of the example of Santa Cruz.

This next problem is grounded in the extent to which graduate programs divert interest and energies away from undergraduate program interests. Stephen Toulmin, former Provost of Crown College at Santa Cruz, made the following comment on this problem,

> "I think Graduate School (i.e. to be Harvard as well as Swarthmore or Claremont), since this is manifestly less successful than the undergraduate enterprise and has also been a real obstacle to the interdisciplinary work that promised to flourish at UCSC in the early hears more than it subsequently has done... Those Boards of Studies which strove hardest to establish their graduate research credentials at Santa Cruz also felt most driven to 'specialize'

> . . . This conflict of goals between the undergraduate and graduate programs at UCSC is the most damaging aspect of its development to date: more so than the more frequently discussed conflict of aims between Colleges and Boards of Studies. For it is the supposed demands of specialized graduate research--ignored with impunity at Chicago--that lend serious prestige to the Boards in their competition with the Colleges, and so make that other conflict worse than it need otherwise be."[16]

Since I agree with Toulmin as to the importance of undergraduate education, and because resources available to the University are unlikely to expand during these times, I am reassured to note that graduate enrollment at Santa Cruz is unlikely to increase substantially in the next few years. (Out of a total enrollment of about 4,800 in 1974, 306 students were enrolled in programs sponsored by the Graduate Division.) Any university that claims a serious concern for undergraduate education should certainly maintain a minimum undergraduate enrollment of some 4,000 students before it begins to explore the field of graduate education. This number provides for enough basic faculty, library and other resources to sustain a varied and comprehensive program.

At Ramapo College we have always insisted that we had no immediate interest in graduate programs, and I still feel that way. If and when we feel the need to move into graduate activities, I would be inclined to use the Master of Philosophy (M. Phil.) and Doctor of Philosophy (D. Phil.) designations instead of M. A. and Ph. D. to indicate the fact that graduate studies in the interdisciplinary institution are by no means the specialized and structured programs of study to be found at more conventional colleges and universities. One reason for exploring the idea of moving into graduate programming is to ensure a future supply of properly qualified faculty members for the interdisciplinary enterprise here and elsewhere. In the meantime, we look forward to the establishment of a faculty exchange program between like-minded institutions, such as Santa Cruz, Green Bay, Evergreen College, Hampshire College, and Ramapo, as a way of encouraging faculty renewal and program development.

4.

The University of Sussex, which opened in 1961, was perhaps the

first comprehensive attempt to redefine the relations between academic subject areas. As noted by Peter Wilby in The Times Higher Education Suppiement, "Sussex's schools of study were not to be subject empires, but alternative contexts within which subjects could be illuminated. The subjects are not subordinate to the schools, but exist in parallel with them. Thus history, sociology and philosophy are taught in all five arts schools, religious studies, English, politics, geography and international relations in four, law and economics in three."[17]

Apparently it was the original intention to create a dialectical tension between the subjects and the schools, and Wilby makes the comment that "The story of Sussex is largely the story of the continuing and deliberately unresolved tension between the two." Over the years the balance of power seems to have moved away from the schools and toward the subjects. At one point in the early 1970's, "there was a body of opinion in favor of creating a departmental structure" although it now appears that the prospect of moving into such a structure has receded. Thus the move away from the schools as units or organization has been arrested, despite the gradual replacement of common preliminary courses and background contextual courses by specialized courses even in the first year program.

Just what the future will hold for the University of Sussex is anyone's guess, but the prognosis seems gloomy at this time. Peter Wilby, in discussing the progress of eight new British Universities in the June 18th edition of The Times Higher Education Supplement says, "New University ideas have not proved certain nor wholesale. They were too frail to stand against the weight of a tradition that was never adequately questioned. . . . There have indeed been interesting experiments, but not radical changes. What (Harold) Perkin called 'the best hope of substantial innovation in British Higher Education for the last century and a half was lost.'"

Despite this pessimistic comment, my own feeling about interdisciplinarity remains one of confidence. Above all I must acknowledge that my sole interest is to improve higher education. It is not to demolish all departments in all universities, nor is it to deny the values of specialized research and scholarship. Interdisciplinarity is not to be advanced as a successor to disciplinar-

ity, but rather as a challenge to its complacency and a check on its excesses.

On these terms it is out of place to complain that the ideas of interdisciplinarians have not found universal acceptance. Many interdisciplinary ideas have already been integrated into the conventional wisdom of higher education, and my guess is that they will remain there whatever happens to particular programs or to particular institutions. For example, the working definition of "general education" has been modified by the impact of interdisciplinary programs, so that today new program elements such as Intercultural Studies and Women's Studies are being incorporated into undergraduate programs across the nation. Likewise, even the most hidebound of institutions will nowadays acknowledge the synergistic potential of interdisciplinary research and will allow the formation of research programs and study institutes outside of established departmental lines of organization in an attempt to facilitate research activities.

At Ramapo we have established in our Schools the kind of organization described in the Nuffield Foundation Report as "...the best structure for a cluster of overlapping interdisciplinary courses..."[18] At Santa Cruz, the Colleges have survived the challenge from the Boards of Study, and they are now proceeding with a re-aggregation of faculty members to ensure that the Colleges adopt a more deliberately defined blend of interdisciplinarity in place of the accidental associations achieved in the early days of rapid growth. An optimistic view of future prospects was included in the Santa Cruz evaluation report submitted to the Western Association of Schools and Colleges in June 1976, in the following comment.

> "All eight colleges, though different from one another in mode of operation as well as in character, and in different stages of development, are vigorous, viable and integral parts of the institution. At the same time, the boards are essential to provide disciplinary cohesion and to fulfill major educational tasks. Tension exists between the two, and the Hegelian dialectic is often not adequately engaged. There is considerable room for improvement... But the team found no serious suggestions that tension should be eliminated by abolishing either the colleges or the boards.

> Indeed the team's own impressions confirm that UCSC has come close to establishing a viable balance, and that it can find ways of accomplishing this still more fully."[19]

Finally, in spite of Wilby's comments and as we have already reported, the Schools at Sussex have withstood a series of challenges and they have not reverted to the departmental structure characteristic of other new Universities in Great Britain.

Obviously we here at Ramapo College must continue to review the organizational arrangements that we adopt. It is my view however that our model of granting substantial autonomy to the Schools within an all-college framework makes sense. By placing major budgetary and personnel decision-making powers within the Schools rather than in disciplinary departments, we continue and reinforce our commitment to interdisciplinarity. We must, of course, pay continued attention to the variety of problems outlined above, and we must be prepared to learn from colleagues in other institutions in our efforts to resolve these problems.

For example, consider the core program of Liberal Education Seminars featured at the University of Wisconsin at Green Bay. All students devote part of their study time over the four-year program to "a variety of learning experiences which relate classic and contemporary concepts and values to contemporary problems and to perennial human concerns."[20] This may be a partial response to the problem of an absence of any structure or definition of graduation standards that I have noted above.

Another important problem that may be tackled more effectively through inter-institutional exchanges of ideas and information is the problem of student attrition, future employment, and future admission to graduate schools. Surely all of us interested in interdisciplinarity, from our several locations, should work together to ensure that more graduate schools come to recognize the abilities of our graduates, and to develop programs that will be appealing to them. Likewise, we might all follow Gren Bay's example and publish a document acknowledging the career prospects provided by our institutional programs. In these ways, we could reassure our students about their future and avoid high attrition rates.

In addition, we should be making serious efforts to ensure appropriate professional recognition for our faculty members, and adequate opportunities for continued professional development, so that they will not suffer as a result of their involvement in our interdisciplinary programs. The record at Ramapo is reasonably successful so far in promoting faculty opportunities for research activities, and encouraging faculty initiative in establishing research institutes.[21] Study of similar activities undertaken on other campuses may provide us with additional ideas. In particular, we might draw some inspiration from the remarkable achievements made in this area at the University of Sussex despite the fact that it has been in operation for only fifteen years.

Finally, in view of some problems experienced with graduate programs, such as the "HisCon" program at Santa Cruz, it would perhaps be worthwhile to learn from experiences at the University of Wisconsin at Green Bay, where

> "Each student must obtain a major professor upon being admitted to the program... In association with the major professor, the student should move at once to complete a graduate committee consisting of at least two members of the graduate faculty in addition to the major professor. At least one of the members must be from outside the student's area of disciplinary emphasis. An additional committee member should be appointed from outside the University community... The committee is responsible for supervising the students' degree program...(which must include a thesis project which)... should not be narrowly construed within the framework of a conventional discipline, but rather it should be a problem in which the student confronts the connectedness of things, as seen in a world where values matter."[22]

Recent developments at Ramapo will promote an ongoing interchange of ideas with like-minded individuals and institutions. These include plans to promote an exchange of faculty members between these institutions. In addition we should make a start toward involving consultants as outside observers of our program development here at Ramapo, and we should take their comments into account in future program planning. Our new Ramapo College journal, Ramapo Papers, will also provide valuable opportunities

for the dissemination of ideas and opinions. We may also hope that the exchange of ideas through CHANGE magazine, through the operations of the "Project Change Group" based in Washington, D. C., and through the new Committee on Non-Traditional Programs established by the American Association of State Colleges and Universities will help us confront the problems ahead.

What we really need in the final analysis is the courage of our convictions. In this connection I shall conclude with a further quotation based on experience at Santa Cruz. In the words of Donald Nicholl, who has had periodic contact with the University since the early days of its development,

> "The outstanding fact is that Santa Cruz was a bold attempt to break out of the prison of miseducation that has been part of an industrialized, computerized society which has learnt to measure quantity so precisely that it has lost the taste for quality.
>
> "Such an attempt requires bold spirits who are prepared to risk the disapproval of the conventional miseducators. Such bold spirits are rare. Many people imagine themselves to be bold but as soon as they begin to realize what the adventure is going to cost they lose their nerve ("I must get back to my career"--into the conventional, computerized safe miseducation). This loss of nerve is not peculiar to Santa Cruz; it is common in all such enterprises--as at Keele or at Black Mountain College. People who lose their nerve are a menace--they try to get back to the springboard which they have just left but they obviously fail to do so and in the process they crash undignified on their bottoms into the water."

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NOTES

1. Josey Bass, San Francisco, California, 1973, pp. 75/76.

2. The University of Chicago Press, Chicago, Illinois, 1976.

3. Interdisciplinarity: Problems of Teaching and Research in Universities, Organization for Economic Co-operation and Development, Paris, 1972, pp. 25/26.

4. Interdisciplinarity, The Nuffield Foundation, London, July 1975, pp. 10.

5. For those interested in academic statistics, we have more than 170 "full-time equated" faculty members serving more than 3300 "full-time equated" students.

6. Ramapo Self-Study Report, page 13.

7. " " " " , page 20.

8. " " " " , page 28.

9. " " " " , page 39.

10. " " " " , page 49.

11. " " " " , page 59.

12. All students at Ramapo College are required to complete two Senior Interdisciplinary Seminars prior to graduation. The Seminars are designed to assist students to achieve a more complete integration of knowledge acquired in earlier courses. Most Senior Seminars are team-taught by two or more faculty members from different subject backgrounds, and enrollment is held to a maximum of 20 students to encourage full participation in the Seminar.

13. Fortunately it seems that at Ramapo College we can just manage with the student/faculty ratios and credit hour conventions that are now built into New Jersey's funding formulae, but I would be fearful that further erosion of these levels of funding would render our task impossible.

14. Santa Cruz Self Study Report, p. 203.

15. " " " " " , p. 206

16. " " " " " , p. 196

17. April 30, 1976, p. 6.

18. Interdisciplinarity, pp. 22

19. Santa Cruz evaluation report, p. 3

20. Catalogue, University of Wisconsin, Green Bay, 1974/76 p. 18.

21. Examples of such research activities here at Ramapo include our Alternate Energy Research Center, and our Urban Studies Institute.

22. A Guide to Graduate Study, University of Wisconsin, Green Bay, 1975/76.

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(a) Report of the Chancellor's Self-Study/Accreditation Commission, 1975

(b) Report of the Evaluation Team, Ernest A. Lynton, Chairman, 1976.

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(a) College Catalog, 1974/76.

(b) A Guide to Graduate Study, 1975/76.

Previously published:

Volume 1: No. 1 - Liberal Arts and Work, Howard B. Radest

No. 2 - Salvationists, Utilitarians, and Environmental Justice, Richard Bond

EDITORIAL POLICY

Ramapo Papers is sponsored by the faculty of Ramapo College. It is devoted to the search for an integration of knowledge. Ramapo Papers is intended as a vehicle for the exploration of the conceptual and practical problems of interdisciplinary education. It will provide a forum in which the scholars and teachers in the sciences, the social sciences, the arts, and the humanities can develop areas of common interest and a common language--prerequisites of an interdisciplinary approach to the creation and transmission of knowledge.

To achieve its aims, Ramapo Papers adopts the following guidelines:

1. It will publish material dealing with the problems of interdisciplinary scholarship including articles arising out of faculty colloquia and seminars. It may include exploration of the epistemological foundations of interdisciplinary study, discussions of pedagogy, or analysis of other institutions using an interdisciplinary approach.

2. It will publish articles on the application of interdisciplinary approaches to traditional disciplines.

3. It will publish material in subject areas which, by their nature, are trans-disciplinary, e.g. Area Studies, Black Studies, Environmental Studies, Women's Studies, Urban Studies.

4. It will seek contributions from outside Ramapo College and in other ways try to provide a link with other institutions and individuals concerned with interdisciplinary research and education.